

ABSTRACT

A refrigerant circuit (10) of a refrigeration apparatus is filled up with carbon dioxide as a refrigerant. In the refrigerant circuit (10), a first compressor (21) and a second compressor (22) are arranged in parallel. The first compressor (21) is connected to both an expander (23) and a first electric motor (31), and is driven by both of the expander (23) and the first electric motor (31). On the other hand, the second compressor (22) is connected only to a second electric motor (32), and is driven by the second electric motor (32). In addition, the refrigerant circuit (10) is provided with a bypass line (40) which bypasses the expander (23). The bypass line (40) is provided with a bypass valve (41). And, the capacity of the second compressor (22) and the valve opening of the bypass valve (41) are regulated so that the COP of the refrigeration apparatus is improved after enabling the refrigeration apparatus to operate properly in any operation conditions.